

## CLAIMS

1. A array antenna base station apparatus,  
comprising:

calculation means for calculation of  
5 reception weights by adaptive signal processing  
using demodulation signals of a communication  
terminal apparatus; and

10 multiplication means for multiplication  
processing using said calculated reception weights  
and said demodulation signals, wherein

15 said multiplication means may perform  
multiplication processing at a point of time when  
communication is opened, using said reception  
weights calculated at the previous communication  
with said communication terminal apparatus, and  
said demodulation signals.

2. A array antenna base station apparatus  
according to claim 1, wherein

20 said multiplication means comprises:  
measuring means for measuring moving states  
of said communication terminal apparatus using  
said reception weights calculated by said  
calculation means; and

25 generation means by which reception weights  
at a point of time when communication is opened  
may be generated using said reception weights  
calculated at the previous communication with said

communication terminal and said measured moving states, and

5 multiplication processing may be performed using said reception weights generated by said generation means and said demodulation signals.

3. A communication terminal apparatus for radio communication with a array antenna base station apparatus, wherein

10 said array antenna base station apparatus comprises;

calculation means for calculation of reception weights by adaptive signal processing using demodulation signals of said communication terminal apparatus; and

15 multiplication means for multiplication processing using said calculated reception weights and said demodulation signals, and

20 said multiplication means may perform multiplication processing using said reception weights calculated at the previous communication with said communication terminal, and said demodulation signals.

4. An array antenna reception method comprising:

25 a calculation step for calculation of reception weights by adaptive signal processing using demodulation signals of a communication

terminal apparatus; and

a multiplication step for multiplication processing using said calculated reception weights and said demodulation signals, wherein

5        said multiplication step may perform multiplication processing at a point of time when communication is opened, using said reception weights calculated at the previous communication with said communication apparatus, and said  
10 demodulation signals.

5.     An array antenna reception method according to claim 4, wherein

      said multiplication step comprises:

      a measuring state for measuring moving states  
15 of said communication terminal apparatus using said reception weights calculated at said calculation step; and

      a generation step by which reception weights at a point of time when communication is opened  
20 may be generated using said reception weights calculated at the previous communication with said communication terminal and said measured moving states, and

      multiplication processing may be performed  
25 using said reception weights generated at said generation step, and said demodulation signals.